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FROM:

Terry W. Kramer

KRAMER & AMADO, P.C.

DATE:

May 17, 2006

SUBJECT:

**U.S. Patent Application** 

Title: GRAPHIC IMAGE TEXTURE GENERATION

Serial No.: 09/118,572

Attorney Docket No.: PHB 34169A

PAGES:

**INCLUDING COVER PAGE (18)** 

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**PATENT** 

### IN THE UNITED STATE PATENT AND TRADEMARK OFFICE BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of

Karl J. Wood et al.

For

GRAPHIC IMAGE TEXTURE

**GENERATION** 

Serial No.:

09/118,572

Filed

July 17, 1998

Art Unit

2628

Examiner

Ryan R. Yang

Att. Docket

PHB 34169A

Confirmation No.

9151

#### APPEAL BRIEF

Mail Stop Appeal Brief Patents Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

Sir.

This Appeal Brief is submitted in support of the Notice of Appeal filed February 14, 2006.

#### I. REAL PARTY IN INTEREST

The party in interest is the assignee, U.S. Philips Corporation. The assignment document is recorded at Reel 009885 and Frame 0906.

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Attorney's Docket No: PHB 34169A

II. RELATED APPEALS AND INTERFERENCES

Appeal No. 2003-0228. By its Decision on Appeal, mailed May 11, 2004, the Board of Patent

Appeals and Interferences reversed a prior final rejection of claims 1-11.

**III. STATUS OF CLAIMS** 

This is an appeal from the Final Office Action dated December 15, 2005 rejecting claims 1-5, 7

and 9. The December 15, 2005 Office Action objected to claims 6, 8, 10 and 11, but found them to be

allowable if rewritten in independent form. No other claims are pending in the application. Thus, the

claims being appealed are claims 1-11.

IV. STATUS OF AMENDMENTS

All amendments filed in this application have been entered. A correct copy of appealed claims 1-

11, including all entered amendments thereto, appears in the attached Appendix.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The present invention relates to an apparatus, and a computer graphics system including said

apparatus, for graphic image texture generation.

The subject matter recited in claim 1, the only independent claim, is directed to an apparatus for

texture mapping in a computer graphics system, using a predetermined set of standardized textures

(page 3, lines 11-14 of the specification), the apparatus having an input to receive via a network (see

-2-

PAGE 8/18 \* RCVD AT 5/17/2006 5:24:44 PM [Eastern Daylight Time] \* SVR:USPTO-EFXRF-5/3 \* DNIS:2738300 \* CSID:703 5199802 \* DURATION (mm-ss):04-14

Attorney's Docket No: PHB 34169A

Fig. 1; and page 6, lines 11-14) identifying data identifying one of the set of standardized textures. The

identifying data comprises one or a sequence of program commands (page 3, lines 17-19). The

execution of these program commands results in the generation of a respective procedural texture of the

standardized set (page 3, lines 20-22).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. Claims 1-5, 7 and 9 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Rhoades et

al. ("Real-Time Procedural Textures", June 1992, Proceedings of the 1992 Symposium in Interactive 3D

Graphics, pages 95-100), hereinafter "Rhoades."

VIL ARGUMENT

In the Final Office Action dated 12/15/2005, the Examiner reiterated a rejection of claims 1-5, 7

and 9 under 35 U.S.C. § 102(b), using Rhoades as a reference, made in a non-final Office Action mailed

June 24, 2005, subsequent to the May I1, 2004 Decision on the prior Appeal. Rhoades is a newly cited

reference. Rhoades was not applied in any rejection of any claim considered in the prior Appeal.

The test for anticipation under section 102 is whether each and every element as set forth in the

claim is found, either expressly or inherently described, in a single prior art reference. Verdegaal Bros.

v. Union Oil Co. of California, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); MPEP §2131. The identical

invention must be shown in as complete detail as is contained in the claim. Richardson v. Suzuki Motor

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Attorney's Docket No: PHB 34169A

Co., 9 USPQ2d 1913, 1920 (Fed. Cir. 1989); MPEP §2131. The elements must also be arranged as

required by the claim. In re Bond, 15 USPQ2d 1566 (Fed. Cir. 1990).

Rhoades does not disclose each and every element as set forth in independent claim 1, from

which claims 2-5, 7 and 9 depend, either expressly or inherently, as described in greater detail below.

A. Rejection of Claims 1, 5-7 and 9 under 35 U.S.C. §102(b)

Claims 1-5, 7 and 9 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Rhoades et

al. ("Real-Time Procedural Textures", June 1992, Proceedings of the 1992 Symposium in Interactive 3D

Graphics, pages 95-100), hereinafter "Rhoades".

1. Claim 1

Rhoades does not teach each and every element recited in claim 1, either expressly or inherently.

In particular, Rhoades fails to teach "using a predetermined set of standardized textures" as

recited in claim 1. Instead, Rhoades describes a software system running on a graphics engine that

displays user-defined procedural textures for use in real-time graphics applications. Rhoades also

describes a texture editor that allows a user to interactively create and edit procedural textures. See

page 95, Abstract. Furthermore, Rhoades teaches away from the notion of a "predetermined set" by

describing an interactive texture editor, that allows a user to create new textures, and dynamically

displays a texture as the user changes its parameters. See page 98, col. 1.

Rhoades also fails to teach the apparatus having "an input to receive via a network identifying

data identifying one of the set of standardized textures" as recited in claim 1. Instead, Rhoades describes

a machine comprising multiple Graphics Processors, renderers, frame buffers and a workstation host,

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Attorney's Docket No: PHB 34169A

wherein all the parts of the machine communicate with each other over a "shared ring network." See

page 96, col. 1 and Fig. 1. Each renderer disclosed in Rhoades is an array of bit-serial pixel processors

operating in "Single Instruction Multiple Data" (SIMD) mode. The Graphics Processors interpret and

execute instruction sets called "T-codes", and produce an Image Generation Controller (IGC) command

instruction stream, which is routed to the appropriate renderers for SIMD execution. See page 96, col. 2,

lines 12-23. The only network described by Rhoades is the "shared ring network" formed by the

different elements of the machine.

Rhoades does not teach the machine being connected to a network through which identifying

data, identifying one of the set of standardized textures, is received, as recited in claim 1. The "shared

ring network" shown in Rhoades is not equivalent to a data network, such as the Internet/World Wide

Web, through which identifying data is received from a remote service provider, as defined in the

specification of the application. See page 6, lines 11-14.

Furthermore, Rhoades fails to teach "the identifying data comprises one or a sequence of program

commands" as recited in claim 1. The "IGC command instruction stream" described by Rhoades does

not anticipate the "sequence of program commands" recited in claim 1 for at least the following reasons.

It is clearly stated by Rhoades that the IGC command instruction stream is routed to the renderers for

SIMD execution, not to a processor operable to implement input program commands to generate

procedural textures. See page 96, col. 2, lines 20-23. The renderers disclosed in Rhoades are not

capable of processing input program commands to generate procedural textures. Rather the renderers

disclosed in Rhoades only execute single instructions and apply those instructions to multiple data to

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Attorney's Docket No: PHB 34169A

send the result to a display device. Rhoades does not teach receiving the identifying data, i.e. the T-

codes, via a network. The T-codes taught by Rhoades are actually directly written and/or modified by

the programmer. Thus, Rhoades states that, "Adding a new T-code to our system is a straightforward

task. Besides coding and testing of the T-code subroutine in C, the programmer needs only to update the

T-code assembler parse table and the T-code subroutine dispatch table." Page 96, col. 2, lines 36-40.

For at least the foregoing reasons, claim 1 is patentable over Rhoades because Rhoades does not

teach each and every element as set forth in claim 1.

2. Claims 2-11

Claims 2-11 depend from claim 1 and are therefore also patentable over Rhoades for at least the

reasons stated above in connection with claim 1, as well as for the separately patentable subject matter

recited therein. This assertion has been admitted by the Examiner with respect to claims 6, 8, 10 and 11.

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Application No: 09/118,572 Attorney's Docket No: PHB 34169A

#### VIII. CONCLUSION

All the claims on appeal are patentable because they are not disclosed, taught or suggested by Rhoades. Accordingly, reversal of the rejection and allowance of claims 1-11 is respectfully solicited.

Respectfully submitted, KRAMER & AMADO, P.C.

Date Date

Date

KRAMER & AMADO, P.C. 1725 Duke Street, Suite 240 Alexandria, VA 22314 Tel. (703) 519-9801 Fax. (703) 519-9802 Terry W Kramer

Attorney's Docket No: PHB 34169A

CLAIMS APPENDIX

1. Apparatus for texture mapping in a computer graphics system, using a predetermined set of

standardized textures, the apparatus having an input to receive via a network identifying data identifying

one of the set of standardized textures, and means for processing the data to generate output texels of the

identified texture, wherein each texture of the standardized set is a procedural texture, the identifying

data comprises one or a sequence of program commands, the execution of which will result in the

generation of a respective procedural texture, with the means for processing data comprising a processor

operable to implement all such input program commands or sequences of input program commands as

required to generate the procedural textures of the standardized set.

2. Apparatus as claimed in claim 1, having at least one further input for one or more predetermined

classes of numerical parameter, with the processor being arranged to generate procedural textures with

reference to the or each numerical parameter value received.

3. Apparatus as claimed in claim 1, having at least one further input for a scale factor, with the

processor being arranged to generate a procedural texture at a resolution determined by a received scale

factor.

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Attorney's Docket No: PHB 34169A

4. Apparatus as claimed in claim 1, wherein the processor is operable to implement only such input

program commands or sequences of input program commands as required to generate those procedural

textures of the standardized set.

5. Apparatus as claimed in claim 1, further comprising a cache memory coupled with the processor,

with the processor being configured to generate said procedural textures as texture maps within said

cache.

6. Apparatus as claimed in claim 5, further comprising an input to receive a scale factor, and an

interpolator to generate output texels from texture map entries in the cache at a resolution determined by

the received scale factor.

7. A semiconductor chip comprising a texture mapping apparatus as claimed in claim 4 on a single

substrate.

8. A semiconductor chip comprising a texture mapping apparatus as claimed in claim 6, with the

processor, cache and interpolator on a common substrate.

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Application No: 09/118,572

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9. A computer graphics system including an apparatus as claimed in claim 1, together with a source

of three-dimensional polygon data, a geometry processor coupled to receive said polygon data and

arranged to generate a two-dimensional representation of said polygons, a source of program commands

coupled to the input of the texture mapping apparatus and specifying textures to be applied to respective

ones of said polygons, and rendering means coupled to receive the outputs of the geometry processor and

texture mapping apparatus and arranged to generate an output image of said polygons with texture

applied.

A computer graphics system as claimed in claim 9, wherein the sources of polygon data and 10.

program commands comprise an interface to a data network to which are coupled remote sources of such

polygon data and program commands, the interface being coupled with a memory holding a store of

network addresses for such remote sources and being operable to format and transmit messages to such

addresses calling for the polygon data and program commands.

A computer graphics system as claimed in claim 10, wherein said program commands are 11.

transmitted over the network in virtual machine code and the system further comprises means for

conversion of the program commands to a local machine code supported by the processor.

- 10 -

Application No: 09/118,572 Attorney's Docket No: PHB 34169A

#### **EVIDENCE APPENDIX**

Listing and copies of evidence relied upon by the Examiner as to grounds of rejection to be reviewed on Appeal:

1. Rhoades et al., "Real-Time Procedural Textures," June 1992, Proceedings of the 1992 Symposium in Interactive 3D Graphics, pages 95-100.

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Application No: 09/118,572 Attorney's Docket No: PHB 34169A

#### **RELATED PROCEEDINGS APPENDIX**

Appeal No. 2003-0228 - Application 09/118,572 1. Decision on Appeal mailed May 11, 2004. See attached copy.